El Segundo Refinery LPS Bulletin – Safety

TP-108A Placed in service without OST protection

IPS Control: 1699826

Contact Information:
Name: Yasin Chaudhry
Phone (CTN) : 615-2500
CAI: YSCH

TP-108A, LPBFW Pump

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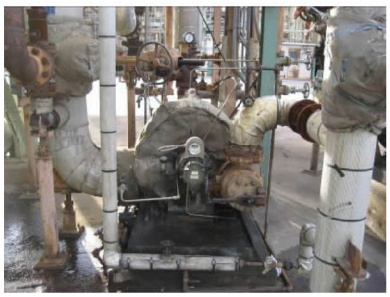

Tenets of Operations Violated:

#3 Always ensure safety devices are in place and functioning

#10 Always involve the right people in decisions that affect procedures and equipment

Incident Description:

WHEN: 10/27/09
WHERE: Cogen - Utilities
WHAT: TP-108A Overspeed Protection

SUMMARY: TP-108A, low pressure boiler feed water pump for V-3950, was taken out of service for over speed test (OST). Maintenance tried to conduct the OST, but it failed due to a broken trip lever found in the trip mechanism. Maintenance left the pump locked out. That same night, Utilities lost power to circuits 64 & 65 from Substation 6 due to high winds. Circuit 64 provides power to MP-108, backup pump for TP-108A. Operations understanding was that TP-108A was left locked out for routine OST (not a defect issue), and this route OST was not completed during day time. TP-108A was placed back into service by the operator and mechanic that night, which potentially could have resulted in an injury to the operator/mechanic had the turbine over-speed come apart (due to the defect identified above).

Investigation Findings:

1. Turnover and communication needs improvement to avoid misunderstanding between daytime maintenance and operations (in this case, regarding state/status of the TP-108A).
2. Ops placed coupling guard over coupling during night shift before startup of TP-108A - this is a machinist function and should not be performed by operators since they are not trained conduct this type of repair activity.
3. The locks and tags were removed by the operator and night mechanic before there was any verification of the equipment status by the machinist, who locked it out during daytime.

Lessons Learned:

1) Always ensure safety devices are in place and functioning before placing equipment in service. If your not sure ask and get the right people involved.

2) It's extremely important to get a thorough turnover from Maintenance and for Maintenance and Operations to communicate about the status of any equipment upon the changing of shifts. Ask questions and fully understand the state of the equipment before accepting it (and inform the appropriate personnel before completing your shift).

3) Always involve the right people in decisions that affect procedures and equipment. Most of us are not qualified to determine if a turbine is coupled up with a pump and ready to be placed into service. Do not install a coupling guard on the pump before getting verification by the applicable machinist.

Recommendations:

1) Reinforce importance of good turnover and communication between Maintenance and Operations.

2) It's extremely important to get a thorough turnover from Maintenance and for Maintenance and Operations to communicate about the status of any equipment upon the changing of shifts. Ask questions and fully understand the state of the equipment before accepting it (and inform the appropriate personnel before completing your shift).

3) Maintenance supervisor to discuss and gain commitment from mechanics to verify status of equipment before removal of locks / tags. This may involve calling the mechanic off duty.